

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the captioned application.

Listing of Claims:

- Claim 21. (Previously Presented) An apparatus for explosively severing a length of pipe, said apparatus comprising:
- (a) a tubular housing having an internal barrel space for receiving an axial column of explosive material between opposite distal ends;
 - (b) first and second detonator socket housings disposed at said opposite distal ends for substantially simultaneously detonating said column of explosive material at said opposite ends;
 - (c) resilient bias means for resiliently translating a first socket housing along said barrel space toward a second socket housing;
 - (d) electrically connected detonators in said socket housings; and,
 - (e) an electrically connected firing device electrically connected to said detonators, said second socket housing and corresponding electrically connected detonator being selectively removable from said housing for inserting said column of explosive material into said barrel space.
- Claim 22. (Previously Presented) An apparatus as described by claim 21 wherein said axial column of explosive is unitized about a substantially central rod structure having a length greater than said axial column of explosive.
- Claim 23. (Previously Presented) An apparatus as described by claim 21 wherein one distal end of said tubular housing is environmentally sealed by said second socket housing that is selectively removable from said tubular housing to load a column of explosive material into said internal barrel.

Claim 24. (Previously Presented) An apparatus as described by claim 23 wherein said second socket housing further includes an aperture for receiving a length of said central rod structure greater than a length of said axial column of explosive.

Claim 25. (Previously Presented) An apparatus as described by claim 21 wherein said first socket housing is resiliently biased by a spring along the length of said internal barrel to compressively confine said column of explosive material between said socket housings.

Claim 26. (Previously Presented) An apparatus as described by claim 21 wherein said axial column of explosive material comprises a plurality of high explosive pellets aligned about said central rod.

Claim 27. (Previously Presented) A method of severing a length of pipe comprising the steps of:

 providing a tubular barrel space for assembling a column of highly explosive material;

 providing exploding wire detonators at opposite ends of said tubular barrel space;

 providing a capacitive firing device for selectively igniting said detonators substantially simultaneously;

 assembling a column of highly explosive material within said tubular barrel space;

 resiliently engaging opposite ends of said explosive material column with said exploding bridge wire detonators;

 positioning said tubular barrel within the internal flow bore of a pipe at a predetermined location along the length of said flow bore; and,

 electrically initiating said detonator means.

Claim 28. (Previously Presented) A method as described by claim 27 wherein said column of explosive material is assembled externally of said tubular barrel and positioned into said barrel space as an integral unit;

Claim 29. (Previously Presented) A method as described by claim 27 wherein a plurality of high explosive pellets are assembled in said barrel space as a column.

Claim 30. (Currently Amended)

A method of severing a string of pipe extending within a well bore from a wellhead site, said method comprising the steps of:

at a first location distal from a well bore, partially assembling a severing tool comprising an internal barrel space having opposite distal ends, at least one of said distal ends formed by a selectively removed end closure, electrically actuated detonators positioned on said end closure and at the other distal end of said barrel space, said detonators being connected to ignition signal conductors;

transporting said partially assembled severing tool to a second location proximate of a well bore, said barrel space being substantially devoid of explosive material between said detonators during such transport;

at said second location, removing said end closure without interrupting said ignition conductor connection and placing a column of explosive material into said barrel space;

closing said barrel space by replacing said end closure;

~~providing a severing tool at a wellhead site, said severing tool having an internal barrel space between opposite distal ends within a substantially tubular housing;~~

~~providing electrically actuated detonators at said opposite distal ends;~~

~~electrically connecting said detonators to an electrical firing device for substantially simultaneous ignition of said detonators;~~

~~delivering said severing tool to said wellhead site with said detonators electrically connected;~~

~~depositing a column of explosive material in said internal barrel space between said exploding bridge wire detonators at said wellhead site without disconnecting said detonators;~~

~~positioning said severing tool at a predetermined location within a string of pipe suspended within said well bore from said wellhead site; and,~~

~~detonating said column of explosive material by an electrical signal to said ignition signal conductors firing device.~~

Claim 31. (Previously Presented) A method as described by claim 30 wherein said column of explosive material is assembled as a singular unit externally of said barrel space and deposited in said barrel space as a singular unit.

Claim 32. (Previously Presented) A method as described by claim 31 wherein an unexploded column of explosive material within said barrel space may be removed from said barrel space as a singular unit.

Claim 33. (Previously Presented) A method as described by claim 30 wherein said column of explosive material is deposited in said barrel space as a serial plurality of pellets.